

## Performance Improvements in Fiber-Optic Links for Multi-Carrier TV Transmission

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*T. Berceli, I. Frigyes, P. Gottwald, P.R. Herczfeld and F. Mernyei. "Performance Improvements in Fiber-Optic Links for Multi-Carrier TV Transmission." 1991 MTT-S International Microwave Symposium Digest 91.1 (1991 Vol. I [MWSYM]): 307-310.*

In broadband networks, there is an increasing need for the transmission of more and more television channels. For this purpose the fibre-optic link proved to be one of the best solutions. However, when the number of TV channels is very high a significant intermodulation distortion will arise. The intermodulation distortion can be reduced by improving the modulation linearity of the laser or by applying a more appropriate modulation method. In this paper both solutions will be discussed in detail. The linearity has been significantly improved by applying an active matching technique. The sensitivity of QPSK TV transmission to disturbing intermodulation has been investigated. A new "group modulation" method offers a better approach for optical multi-carrier TV transmission.

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